

Serial No. 10/092,746

LISTING OF CLAIMS:

Please reconsider the claims as follows:

- 1 1. (currently amended) A method, comprising:
2 reducing the power level of an optical signal propagating in an optical fiber path
3 in response to the absence of a counter-propagating supervisory signal in the optical fiber
4 path; and
5 reducing counter-propagating optical power in response to the absence of the
6 optical signal.
2. (canceled)
- 1 3. (currently amended) The method of claim 1 2, wherein the step of reducing the power
2 level of the optical signal and the step of reducing counter-propagating optical power are
3 performed substantially at the same time.
- 1 4. (currently amended) The method of claim 1 2, wherein the step of reducing the power
2 level of the optical signal comprises at least one of:
3 reducing pump power supplied by at least one pump source coupled to the optical
4 fiber path; and
5 reducing gain supplied by at least one optical amplifier coupled to the optical
6 fiber path.
- 1 5. (previously presented) The method of claim 4, wherein the step of reducing the
2 counter-propagating optical power comprises reducing counter-propagating pump power
3 supplied by at least one pump source coupled to the optical fiber path.
- 1 6. (previously presented) The method of claim 1, wherein the power level of the optical
2 signal is reduced by a predetermined amount such that harm from an optical signal
3 emanating from a fault in the optical fiber path is substantially reduced.

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1 7. (currently amended) The method of claim 1 ~~2~~, wherein the counter-propagating
2 optical power is reduced by a predetermined amount such that harm from an optical
3 signal emanating from a fault in the optical fiber path is substantially reduced.

1 8. (original) The method of claim 1, further comprising the step of restoring the power
2 level of the optical signal in response to the presence of the counter-propagating
3 supervisory signal.

1 9. (currently amended) The method of claim 1 ~~2~~, further comprising the step of restoring
2 the counter-propagating optical power in response to a notification of the presence of the
3 counter-propagating supervisory signal.

1 10. (currently amended) A method, comprising:

2 a) detecting loss of a supervisory signal counter-propagating in an optical fiber
3 path at a first network element; ~~and~~

4 b) responsive to the loss of the supervisory signal in the optical fiber path,
5 reducing the power level of an optical signal output to the optical fiber path from the first
6 network element by a predetermined amount;

7 c) detecting loss of the optical signal propagating in the optical fiber path at a
8 second network element; and

9 d) responsive to the loss of the optical signal, reducing counter-propagating
10 optical power output from the second network element by a predetermined amount.

11. (canceled)

1 12. (currently amended) The method of claim 10 ~~11~~, wherein the steps b) and d) are
2 performed substantially at the same time.

1 13. (original) The method of claim 10, wherein step b) comprises at least one of:

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2 reducing pump power supplied by at least one pump source coupled to the optical
3 fiber path in the first network element; and
4 reducing gain of at least one optical amplifier coupled to the optical fiber path in
5 the first network element.

1 14. (currently amended) The method of claim 10 ~~11~~, wherein step d) comprises reducing
2 counter-propagating pump power supplied by at least one pump source coupled to the
3 optical fiber path in the second network element.

1 15. (currently amended) The method of claim 10 ~~11~~, further comprising:
2 e) responsive to the loss of the optical data signal, reducing counter-propagating
3 optical signal power output from at least one additional network element by a
4 predetermined amount.

1 16. (currently amended) A network element adapted for use in an optical transmission
2 system, comprising:
3 ~~at least one~~ a first gain element, for providing an upstream optical signal to an
4 upstream optical fiber path; and
5 a controller, for reducing the power level of ~~an~~ the upstream optical signal
6 generated by the ~~at least one~~ first gain element to the upstream optical fiber path in
7 response to the absence of a counter-propagating supervisory signal in the upstream
8 optical fiber path;
9 a second gain element, for providing a counter-propagating downstream optical
10 signal to an downstream optical fiber path; and
11 the controller, for reducing the power level of the counter-propagating
12 downstream optical signal generated by the second gain element to the downstream
13 optical fiber path in response to the loss of a optical signal propagating in the
14 downstream optical fiber path.

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1 17. (original) The network element of claim 16, wherein the controller, in response to the
2 absence of the counter-propagating supervisory signal, provides an indication to a
3 downstream network element that the supervisory signal is absent.

1 18. (original) The network element of claim 16, wherein the network element comprises
2 a repeater.

1 19. (original) The network element of claim 18, wherein the at least one gain element
2 comprises at least one of an optical amplifier and a pump source.

1 20. (previously presented) In a lightwave communication system having a plurality of
2 network elements for supplying an optical signal adapted for transmission in an optical
3 fiber path, an apparatus for controlling power of an optical signal propagating in the
4 optical fiber path comprising:

5 means for detecting loss of a supervisory signal counter-propagating in the optical
6 fiber path; and

7 a first automatic power reduction circuit for reducing the power level of an optical
8 signal output to the optical fiber path from a first network element by a predetermined
9 amount in response to the loss of the supervisory signal in the optical fiber path;

10 means for detecting loss of the optical signal propagating in the optical fiber path;
11 and

12 a second automatic power reduction circuit for reducing counter-propagating
13 optical power output from a second network element by a predetermined amount in
14 response to the loss of the optical signal.

21. (canceled)